

PROPERTIES OF MATTER

NAME: _____

HOUR: _____

QUESTION

How can different substances be grouped by their properties?

KNOWLEDGE PROBE

A PROPERTY is a quality or characteristic that can be used to describe a substance.

Use what you know: What are 4 properties of a chocolate chip cookie?

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Watch the YouTube video on chemical and physical properties.

What are some properties that scientists use to describe substances?

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PREDICTION

For this investigation you will be given the following substances

- Coca-Cola
- Baking Soda
- Alcohol
- Sugar
- Tums Tablet
- Lemon Juice

Which substances do you predict will have the most properties in common? Please structure your sentence like this. *I predict that , because...*

INVESTIGATION

Physical Properties

- What is the color?
- What is the shape and size of the particles?
- What is the texture?
- What phase is the matter (solid, liquid, gas)?
- Solubility - Does the substance dissolve in water?
- Other things you can observe with your senses (NOT TASTE)?

Chemical Properties

- pH - Dip a pH strip in the substance (dissolve if needed) and record the number.
- Reactivity - drop some vinegar on the substance, does it react?
- Flammability
 - For powders, dip the end of a stick in the powder and hold in the flame
 - For the liquids dip the end of the stick in the liquid

Substance	Physical Properties	Chemical Properties
Coca-Cola		
Sugar		
Baking Soda		
Tums Tablet		
Alcohol		
Lemon Juice		

OBSERVATIONS

Design a table or chart or diagram to show which substances have similar PHYSICAL properties.

Design a table or chart or diagram to show which substances have similar CHEMICAL properties.

EXPLANATION

- Which substances would you CLAIM have the most properties in common?
- Use EVIDENCE from the investigation to support your decision.

CLAIM:

EVIDENCE:
